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CLAIMS

Art = 34

1. Method for the detection and determination of GnRH receptors on tumor cells  
5 originating in brain and/or nervous system and/or the meninges and/or of Kaposi sarcoma  
comprising contacting said cells with a ligand for a GnRH receptor and determining if  
binding has occurred.
2. Method according to claim 1 characterized in that said ligand is an antibody.
- 10 3. Method according to claim 1 or 2 characterized in that said ligand is labeled.
4. Method according to claim 1 characterized in that the bound ligand is determined  
with labeled anti-ligand, preferably an antibody.
- 15 5. Method for the detection and determination of GnRH receptors on degenerate cells  
of a tumor originating in brain and/or nervous system and/or the meninges comprising:
- a) homogenizing peroperatively collected tumor tissue;
  - b) separating the membrane fraction;
  - 20 c) determining the protein concentration in the membrane fraction of b); and
  - d) determining the concentration of GnRH receptors in the membrane fraction  
of b)
- to diagnose the above tumors.
- 25 6. Method according to claim 1 wherein the tissue is derived from a Glioblastoma  
multiforme, medulloblastoma, pinealoma, neuroblastoma, craniopharyngeoma,  
meningeoma, chordoma, Ewing sarcoma, malignant melanoma, or Kaposi sarcoma.
- 30 7. Diagnostic kit for the practice of the method according to claims 1 to 6 comprising a  
ligand for a GnRH receptor.

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8. Diagnostic kit according to claim 7 for the detection of GnRH receptors for immunohistological diagnostics, for monitoring of the therapy, aftercare, early recognition of recidivation, and early recognition of tumors originating in brain and/or nervous system and/or the meninges comprising either a GnRH agonist or a monoclonal or polyclonal antibody against GnRH receptors, or one or more specific primer for GnRH receptors, e.g. for the amplification of GnRH receptor DNA in a reverse transcriptase polymerase chain reaction (RT-PCR).

9. Diagnostic kit according to claim 3 comprising the use of the method according to claims 7 or 8.

10. Use of GnRH agonists or GnRH antagonists for the preparation of a medicament for the treatment of a tumor originating in brain and/or nervous system and/or the meninges and/or for the treatment of a Kaposi sarcoma.

11. Use of GnRH agonists or GnRH antagonists for the preparation of a medicament for the treatment of a Glioblastoma multiforme, medulloblastoma, pinealoma, neuroblastoma, craniopharyngeoma, meningioma, chordoma, Ewing sarcoma, malignant melanoma, or Kaposi sarcoma.

12. Conjugate of a GnRH agonist or GnRH antagonist to melatonin or to a melatonin analogue.

13. Use according to claim 10, whereby the GnRH agonists or GnRH antagonists are used in combination with a cytotoxic substance.

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